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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

GPNE CORP.,

Plaintiff,

vs.

APPLE, INC.

Defendant.

Case No: 12-cv-02885-LHK

**GPNE'S RENEWED MOTION FOR
JUDGMENT AS A MATTER OF LAW
OR ALTERNATIVELY FOR A NEW
TRIAL**

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I. Introduction

At trial, GPNE presented compelling evidence that each accused Apple device literally infringes every limitation of all three of GPNE's asserted patent claims. Apple responded not with evidence of non-infringement, but with improper arguments to the jury about the scope of a claim term: node. This Court acknowledged at *Markman* that using the term "pager" in the construction of "node" would yield ambiguity over the scope of GPNE's claims, yet at no point was this ambiguity ever clarified to the jury. Instead, Apple was allowed to argue to the jury that GPNE was "stretching" the scope of its claims to include smartphones and tablets—despite three holdings from this Court permitting this broader scope—and that "pagers" and "paging systems" are narrow words characterized only by a specific set of requirements: low data, low power, and the simulcasting of messages on certain FCC frequencies. This was error. "When the parties raise an actual dispute regarding the proper scope of these claims, the court, not the jury, must resolve that dispute." *O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008).

Apple's arguments are not a legal defense to infringement—the claims mean what the Court says they mean, and neither party can "stretch" or "shrink" the scope of the claims at trial. Instead of asking the jury to decide whether Apple's devices perform the limitations and two-phase process spelled out in the claims, the entire trial became an exercise in asking the jury to construe claims. Without these critical errors, no reasonable juror could have found for Apple on the issue of infringement as Apple put forward virtually no evidence to contest that it sends and receives signals exactly as contemplated by GPNE's claims.

GPNE renews its motion for judgment as a matter of law under Federal Rule of Civil Procedure 50(b) and seeks in the alternative a new trial under Rule 59 for five independent reasons related to the term "node." First, the Court erred in construing the term "node" as a type of "pager." There was no support for this construction in the claims and using the words "pager" and "paging system that operates independently of a telephone network" improperly imported limitations from the preferred embodiments. Second, having used these terms in the construction of "node," the Court erred in not providing the scope of these disputed terms to the jury and

1 instead asking them decide what the claims encompassed. Third, Apple’s arguments for a
 2 narrower meaning of the term “node” were improper and contrary to this Court’s own
 3 construction and previous rulings. Fourth, even assuming *arguendo* that the jury could construe
 4 the scope of the term “node,” Apple urged the jury to determine that scope using an improper
 5 “person on the street” standard. Fifth, the Court erred in failing to instruct the jury that Apple’s
 6 arguments were improper and that unconstrued terms should be given their plain and ordinary
 7 meaning to a person skilled in the art after reading the entire patent at the time of the invention.

8 Finally, the jury’s verdict of non-infringement was not supported in light of Apple’s
 9 decision not to dispute that its devices send and receive the signals called for by GPNE’s
 10 invention. The overwhelming evidence in favor of infringement warrants granting judgment as a
 11 matter of law for GPNE, or alternatively, a new trial.

12 **II. Legal Standard**

13 **A. Judgment as a Matter of Law**

14 Judgment as a matter of law (“JMOL”) is appropriate when “there is no legally sufficient
 15 evidentiary basis for a reasonable jury to find for that party on that issue.” Fed. R. Civ. P.
 16 50(a)(1). A motion for JMOL may be renewed after a jury verdict and accompanied by a request
 17 for a new trial under Rule 59. *See* Fed. R. Civ. P. 50(b). The Court may overturn a jury verdict
 18 ““if the evidence, construed in the light most favorable to the nonmoving party, permits only one
 19 reasonable conclusion, and that conclusion is contrary to the jury’s verdict.”” *Lucent Techs., Inc.*
 20 *v. Gateway Inc.*, 580 F.3d 1301, 1309 (Fed. Cir. 2009) (quoting *Pavao v. Pagay*, 307 F.3d 915,
 21 918 (9th Cir. 2002)). “Under Rule 50, a court should render judgment as a matter of law when a
 22 party has been fully heard on an issue and there is no legally sufficient evidentiary basis for a
 23 reasonable jury to find for that party on that issue.” *Reeves v. Sanderson Plumbing Prods.*, 530
 24 U.S. 133, 149 (2000).

25 **B. Motion for New Trial**

26 Whether to grant a new trial on some or all issues, pursuant to Federal Rule of Civil
 27 Procedure 59, is a matter of the trial court’s discretion. *City Solutions, Inc. v. Clear Channel*
 28 *Commc’ns*, 365 F.3d 835, 843 (9th Cir. 2004). Courts apply a lower standard of proof to motions

for new trial than they do to JMOL motions. *William Inglis & Sons Baking Co. v. ITT Cont'l Baking Co., Inc.*, 668 F.2d 1014, 1026–27 (9th Cir. 1981). “[T]he trial court may grant a new trial, even though the verdict is supported by substantial evidence, if ‘the verdict is contrary to the clear weight of the evidence or is based upon evidence which is false, or to prevent, in the sound discretion of the trial court, a miscarriage of justice.’” *Wordtech Sys, Inc. v. Integrated Networks Solutions, Inc.*, 609 F.3d 1308, 1313 (Fed. Cir. 2010) (quoting *United States v. 4.0 Acres of Land*, 175 F.3d 1133, 1139 (9th Cir. 1999)). In deciding a motion for new trial, the court has “the right, and indeed the duty, to weigh the evidence” and may evaluate the credibility of the witnesses. *Murphy v. City of Long Beach*, 914 F.2d 183, 187 (9th Cir. 1990); *United States v. Kellington*, 217 F.3d 1084, 1095 (9th Cir. 2000). The court is not required to view the evidence from the perspective most favorable to the prevailing party. *Kellington*, 217 F.3d at 1095.

C. Claim Construction

“Determining literal infringement is a two-step process: the proper construction of the asserted claim and a determination whether the claim as properly construed reads on the accused product or method.” *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, 694 F.3d 1312, 1319 (Fed. Cir. 2012) (internal quotes omitted). Although the second question is a question of fact for the jury, the first question—claim construction—is a question of law for the court. “[T]he construction of a patent, including terms of art within its claim, is exclusively within the province of the court.” *Markman v. Westview Instruments*, 517 U.S. 370, 372 (1996). “When the parties raise an actual dispute regarding the proper scope of a patent claim, the court, not the jury, must resolve that dispute.” *O2 Micro Int'l Ltd.*, 521 F.3d at 1360. Courts must “resolve disputes about claim terms and [] assign a ***fixed, unambiguous, legally operative meaning to the claim***.” *Liquid Dynamics Corp. v. Vaughan Co.*, 355 F.3d 1361, 1367 (Fed. Cir. 2004).¹ “Arguing claim construction to the jury is inappropriate because it risks confusion and the likelihood that a jury will render a verdict not supported by substantial evidence.” *Apple, Inc. v. Samsung Electronics Co.*, 12-CV-00630-LHK, 2014 WL 660857, at *3 (N.D. Cal. Feb. 20, 2014) (citing *CytoLogix Corp. v. Ventana Med. Sys., Inc.*, 424 F.3d 1168, 1173 (Fed. Cir. 2005)).

¹ All emphases added unless otherwise noted.

1 “Black letter law dictates that ‘the words of a claim are generally given their ordinary and
2 customary meaning.’” *Id.* at *3 (quoting *Phillips v. ARW Corp.*, 415 F.3d 1303, 1312 (Fed. Cir.
3 2005) (en banc)). “[T]he ‘ordinary meaning’ of a claim term is its meaning to the ordinary artisan
4 after reading the entire patent . . . at the time of the invention.” *Id.* Furthermore, “[a]n
5 interpretation of one claim that renders another claim meaningless is disfavored.” *CytoLogix*
6 *Corp.*, 424 F.3d at 1173.

7 This black letter law applies equally to resolving disputes over “a claim term or a disputed
8 term within a claim construction.” *Advanced Fiber Technologies (AFT) Trust v. J & L Fiber*
9 *Servs., Inc.*, 674 F.3d 1365, 1373-74 (Fed. Cir. 2012); *see also Edwards Lifesciences LLC v. Cook*
10 *Inc.*, 582 F.3d 1322, 1334 (Fed. Cir. 2009) (concluding that the district court correctly clarified
11 the “disputed definition” that was provided in the initial claim construction).

12 **III. Background**

13 At trial, GPNE asserted three claims against Apple: Claim 44 of U.S. Patent No.
14 7,792,492 (the ‘492) and Claims 19 and 22 of U.S. Patent No. 7,570,954 (the ‘954) (together, the
15 “Asserted Claims”). All three of these apparatus claims require as their first limitation a “first
16 node.” The scope of this term has been disputed since *Markman*, and remained the primary focus
17 of Apple’s infringement defense at trial.

18 **A. Markman**

19 During claim construction, Apple argued that a “node” should be construed as a “pager,”
20 which in Apple’s view included only legacy beepers that operate on broadcast paging frequencies
21 allocated by the FCC. With this narrow scope for the term “node,” Apple sought to preclude
22 application of GPNE’s patents to multi-feature smartphones and other wireless devices like the
23 iPhones and iPads: “Persons of ordinary skill in the art also understood ‘mobile phones’ to be
24 distinct devices from ‘pagers’ that operate within distinct networks.” Apple’s Claim Construction
25 Br., Dkt. 72 at 5. According to Apple, there was “no doubt that the Patents-in-Suit are directed to
26 paging networks and *not* integrated devices that function on both paging and mobile telephony
27 networks.” *Id.* at 7 (emphasis in original). And, since the word “cell phone” was alive and well in
28 1994 and yet the word “pager” appeared in the disclosure, Apple argued that the devices in

1 question could not apply to smartphones, despite having multiple functions. *Id.* at 7.

2 GPNE repeatedly pointed out the error in Apple's overly narrow construction, which
 3 assumed that a device cannot be both a phone and a node. GPNE's proposed construction
 4 accounted for this: "a device in a network that can transmit and receive information." GPNE
 5 explained that the device being described was far more advanced than the pagers available on the
 6 marketplace at the time of the invention. 6-6-13 Markman Hr'g Tr. at 78 ("When these gentlemen
 7 got together with a patent attorney in 1994, they didn't have the term 'smartphone.' . . . What's
 8 described here is a new device, a device that has a computer, a memory, two antennas, that has a
 9 touch pad to type, or a keyboard where you can type the equivalent of e-mails to other people
 10 wirelessly"). Figures 2 and 8, which illustrate the preferred embodiments, reveal devices that
 11 function more like minicomputers than legacy pagers or even cell phones of the time. The devices
 12 could have graphics displays and a touch sensitive writing pad.

13 GPNE highlighted for the Court in its briefing and at the hearing the potential confusion
 14 that would result over the scope of the claims should the Court use the term "pager" to construe
 15 "node." Dkt. 69 at 4 ("Defendants propose an incorrect ambiguity by inserting the term 'pager'
 16 into 'node' as it (1) ignores the entirety of the specification that manifestly improves upon the
 17 one-way pagers of the time, and (2) *only begs the question of what a 'pager' is or does in the*
 18 *context of the asserted claims.*"). GPNE accurately predicted that if the term "pager" were used,
 19 Apple would try to argue either at summary judgment or trial that "'we make phones and e-
 20 readers and tablets,' not whatever we decide a pager is." Markman Tr. at 65:5-11; *id.* 80:17-24.

21 The Court acknowledged at the hearing that if it used the term "pager" in construction of
 22 "node," the scope of the term "node" would essentially be decided by the jury. The Court framed
 23 the current issue in a question back to Apple:

24 [GPNE Counsel] is right. If I do say it's 'a pager that's got this enhanced
 25 capability to do two-way data communication,' then *I'm just kicking the can*
 26 *down the road* and then we're going to have to *have a fight as to what a pager is,*
 27 *and it's not defined in the patent itself,* although it certainly is used throughout
 28 the patent. So tell me, *then what is a pager?* How are we going to *define* that?
Are we going to need to have a subsequent claim construction on that term? . . .
But what is a Pager? How are we going to define 'pager'?"

1 Markman Tr. at 81:19-82:2, 82:23-24.

2 Apple assured the Court that using “pager” and leaving it undefined was not going to be a
 3 problem. Apple’s proposed solution was to have the jury “look at a pager as it operates and as it’s
 4 designed to *operate within the full context of this disclosure*. . . . I don’t think we’re setting up a
 5 situation where we construe the construction just because the word ‘pager’ appears as the
 6 construction of ‘node’ because *there’s more to it than just a pager*.” *Id.* at 83:1-2, 15-18. Apple
 7 argued that a person of skill in the art at the time the application was filed in 1994 would
 8 understand what “pager” meant. *Id.* at 83:16-23. The Court was not convinced and even asked:

9 [W]hat about our jury? They’re not going to need *help on knowing what that*
 10 *[term pager] means?* . . . Then what’s going to happen with ‘pager’? We’re just
 11 going to assume the jury understands what a person of ordinary skill at the time
 would understand ‘pager’ to mean?

12 *Id.* at 83:24-25, 84:23-25. Apple in response argued that the meaning of the term “pager” then
 13 “becomes a fact-based issue” and “[w]e could talk about what a pager is or isn’t in the perspective
 14 of one of ordinary skill in the art at the time that these patents were filed . . . if you read the
 15 specification in its entirety.” *Id.* at 85:10-20.

16 Based on Apple’s incorrect representations that the scope of a term could become a fact
 17 question, and over GPNE’s protestations, the Court construed node as a “pager with two-way data
 18 communications capability that transmits wireless data communications on a paging system that
 19 operates independently from a telephone network.” Markman Order, Dkt. 87 at 18-19. The Court
 20 acknowledged the complete absence of the word “pager” in the claims themselves and relied
 21 heavily on the two exemplary embodiments even while noting that such embodiments should not
 22 limit the scope of the claims. *Id.* at 9-11. However, the Court never limited the scope of the term
 23 “node” to just the legacy pagers (sometimes called beepers), which Apple has argued are
 24 characterized by low data rates, low power, and the use of simulcast messaging over a certain set
 25 of frequencies designated by the FCC. The Court instead cited all of the language in the
 26 specification that this device was an “enhanced” device that could “allow for two-way data packet
 27 communications.” *Id.* at 14-15.

28 The Court included in the construction the phrase “operates independently of a telephone

1 network” although that language does not appear in the claims and the Court rejected Apple’s
 2 main arguments on this point. Apple contended that devices that operated independently of a
 3 telephone network “cannot operate on the telephone network.” *Id.* at 16. The Court disagreed:
 4 “[W]hile the ‘node’ must be capable of transmitting data on a ‘paging system’ that is independent
 5 of the telephone network, ***the ‘node’ is not precluded from also having the capability of***
 6 ***operating on the telephone network.***” *Id.* at 16. “A paging system may exist and operate
 7 independently of the telephone network ***without requiring that individual paging units operate***
 8 ***entirely exclusively from the telephone network.*** A pager unit could, for example, transmit
 9 certain data communications on a paging system that ‘operates independently from [the]
 10 telephone system,’ while engaging in other types of communications on the telephone system.”
 11 *Id.* at 17. This was supported by the specification itself, which “suggest that the paging system
 12 may still have the capability to interact with the telephone system.” *Id.* at 17 n.6. The phrase thus
 13 meant only “that the system can return a ‘data communication’ or a ‘page call’ without ‘accessing
 14 the telephone system,’ and does not necessarily mean that the system and/or individual pager
 15 units cannot have any interaction with the telephone system.” *Id.* at 17-18.

16 As with “pager” and “paging system,” the Court left open the meaning of “telephone
 17 network” although implicit in the Court’s discussion was an acknowledgment that the “telephone
 18 network” referred to in the patent specification does not map onto the 3G and 4G data networks
 19 of today. In ruling on *Daubert*, the Court reminded the parties that it “found in its claim
 20 construction order that the Patents-in-Suit relate primarily to pager technology, ***which is just one***
 21 ***aspect of 3G and 4G LTE technology.***” Dkt. 242 at 9 (citing Dkt 87 at 8-19). Nonetheless, at
 22 trial, Apple argued to the jury that the 3G and 4G networks *are* telephone networks. *See, e.g.,*
 23 Trial Tr. at 211 (Apple arguing in opening that its devices operate on “the AT&T network and on
 24 the T-Mobile network and on the Verizon network. ***Those are telephone networks***”); *id.* at 1145
 25 (Q. [Dr. Wilson,] What kind of networks do Apple products work on? A. They work on cellular
 26 telephone networks. . . . Q. Those three protocols, GPRS, EDGE, and LTE, are Apple products
 27 capable of using them any place other than a cellular telephone network? A. No.”).

28 B. Summary Judgment

On summary judgment, Apple tried to use the lack of clarity in the Court’s construction of the term “node” to its advantage by arguing—exactly as GPNE predicted—that Apple could not infringe because Apple iPhones and iPads are not legacy beepers operating on broadcast paging frequencies set by the FCC. Apple insisted, as it had at *Markman*, that the only proper scope of the words “pager” or “paging system” was set forth not in the intrinsic patent evidence considered during claim construction, but in supposedly “authoritative industry sources” from 2006 onward—over ten years after the time of the invention. Apple’s MSJ, Dkt. 187 at 4-5. *See also* 4-3-14 Hrg. Tr. at 25-29 (arguing that Agilent testing was irrelevant because cellular data networks like GPRS were not the same as the broadcast paging systems regulated by the FCC). GPNE pointed out Apple’s thinly veiled efforts to reargue claim construction and reminded the Court that these devices need not be legacy pagers to fall within the construction of “node.” GPNE Opp. to MSJ, Dkt. 201, at 2-3, 7; *see also* 4-3-14 Hrg. Tr. at 29-30 (“[Apple] is trying to read out of the GPNE patent claims, as you’ve construed them, the possibility that this device can work on a cellular network.”).

The Court denied summary judgment. Dkt. 239. In doing so, the Court repeatedly *rejected* Apple’s argument that the term “node” even when limited to a “pager” capable of operating on a “paging system” must exclude iPhones and iPads simply because they were not legacy beepers that operated on broadcast paging systems:

- “GPNE, however, does not dispute that smartphones and tablets are not commonly called ‘pagers.’ Rather, GPNE argues that modern-day cellular networks ***include paging technologies that allow devices on the networks to be properly called pagers***, at least ***within the scope of the meaning of ‘pager’*** as understood at the time the patent application was filed.” *Id.* at 9.
- “Apple has previously conceded ***that the definition of ‘pager’ is a fact issue*** dependent on whether the accused device operates independently from a telephone network.” *Id.* at 7-8.
- “GPNE thus contradicts Apple’s evidence with substantial evidence of its own showing that iPhones and iPads ***can be considered ‘pagers’ in addition to smartphones and tablets***. As such, GPNE presents sufficient evidence for a reasonable jury to conclude that the accused devices are ‘pagers.’ Especially in light of Apple’s suggestions at the Markman hearing that whether the accused devices are ‘pagers’ is an ‘issue of fact’ ***and that ‘pager’ can be defined in the context of whether the device can communicate on a network independent of the telephone system...*** summary judgment of noninfringement on ‘pager’ is improper.” *Id.* at 10.

The Court, however, could not properly frame the ambiguity in the word “pager” as an

1 infringement question in light of Apple’s assertions that this could be a question of fact: “It is
 2 undisputed that iPhones and iPads use only modern cellular systems like General Packet Radio
 3 Service (“GPRS”) and Long Term Evolution (“LTE”) for data communication. The infringement
 4 question presented here, then, is whether a ‘pager’ can use GPRS and LTE systems.” *Id.* at 8.

5 **C. Trial**

6 Despite having been told by this Court on three separate occasions that the scope of the
 7 term “node” was broad enough to encompass modern day smartphones and modern day cellular
 8 data networks, Apple argued to the jury that the term had a much narrower scope simply because
 9 the construction referenced “pagers,” “paging systems” and “telephone networks.” Apple
 10 repeatedly told the jury that it was GPNE that was “stretching” its patent claims. The very
 11 concept of “stretching” patent claims implies an argument about the scope of claims—one that
 12 should never have been made to the jury. Apple persisted in this improper argument even though
 13 Apple was the party wrongfully trying to narrow the scope of GPNE’s claims as construed by this
 14 Court. Because the Court had already ruled that the parties could not reference the Court’s
 15 previous holdings, GPNE was not allowed to explain the Court’s previous interpretations of this
 16 critical claim term to the jury. Dkt 319 at 1 (“Neither party may refer to discovery disputes,
 17 motion practice, or rulings in this case (except for the Court’s specific claim constructions).”).

18 **IV. Argument**

19 **A. The Court Erred on Issues Relating to Claim Construction**

20 The Court erred in five separate ways surrounding the term “node,” each of which
 21 warrants granting GPNE a new trial or judgment as a matter of law. First, the Court’s
 22 construction of “node” narrowed the term inconsistent with the broad meaning supported by the
 23 disclosure. Second, the Court erred by leaving the jury to decide the question of the scope of
 24 “node.” Third, Apple improperly argued that GPNE disclaimed covering cell phones and was
 25 “stretching” its claims beyond legacy pagers, contrary to the Court’s repeated holdings which
 26 GPNE could not explain to the jury. Fourth, even if the jury could determine the scope of the
 27 claims—which it cannot—Apple argued an improper standard for interpreting “pager” and
 28 “paging system.” Fifth, the Court erred in not instructing the jury on the proper scope of these

terms. As to the actual heart of the invention, the two-phase access process, Apple conceded its devices perform each step. Thus, without these errors, no reasonable juror could have found non-infringement.

1. The Court Failed to Properly Construe the Claim Term “Node”

Using the words “pager” and “paging system that operates independently of a telephone network” in the construction of “node” was legal error. As the Court acknowledged, none of the asserted claims use the term “pager” or “paging system” to describe the apparatus claimed. The ‘492 and the ‘954 patents themselves are both directed in their titles to various forms of “communication system[s]” wherein a “node” sends and receives messages from a controller. *See, e.g.*, Claim 44 of the ‘492 (depending on Claim 37). There is nothing in these claims that would require limiting the claimed “node” to a legacy “pager” on a legacy “paging system,” nor to require “operating independently from a telephone network.”

To the extent there is ambiguity over the scope of the term “node,” the proper construction is a “device in a network that can transmit and receive information.” It is well established that “if an apparatus claim recites a general structure without limiting that structure to a specific subset of structures, we will generally construe the term to cover all known types of that structure that the patent disclosure supports.” *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (holding structural term “member” not limited to example in preferred embodiment); *see Sjolund v. Musland*, 847 F.2d 1573, 1581–82 (Fed. Cir. 1988) (declining to limit claim term “baffle” to only rigid baffles and term “panel” to only panels of lattice construction and noting it would have been error for jury to construe such limitations into these terms).

The patent disclosure supports giving “node” its broad, general meaning. GPNE’s invention was not limited to the simple pagers that pre-dated the invention. The patents in suit are directed to a device that enhances and improves upon existing pagers of the time. The patents disclose a two-way data communication system where the individual devices send and receive data packets (i.e., messages, images, and graphics) back and forth in a network. The devices disclosed were not “pagers” of that time that required a return telephone call to respond to a page. The patent describes “pager units” and various components (including a microprocessor, memory,

1 interface, etc.) with reference to Figure 2 and Figure 8. *See* Dinan Decl. in support of GPNE’s
 2 Claim Construction Br., Dkt. 69-6 ¶¶ 26-28. A person of skill in the art upon reading this patent
 3 disclosure with an understanding of the art in 1993 and 1994 would understand that the device
 4 disclosed was general, not merely a legacy pager that existed at the time of the invention for
 5 sending short messages on a broadcast system. Instead, the claimed node would be “enhanced
 6 with pre-programmed software and hardware to allow for two-way data packet communications
 7 through a central control station.” *Id.* ¶ 28.

8 GPNE’s proposed construction is more consistent with the intrinsic evidence. At no point
 9 in the disclosure or during the prosecution history did GPNE narrow the term “node” to only
 10 include legacy beepers on certain paging frequencies. The disclosure could not be further from
 11 this description: the GPNE device can send high data messages like graphics, across a whole
 12 range of powers including as low as 3 watts, in a system that tracks the location of the device
 13 using cellular handover and deletes the registration of the unit after it leaves a certain
 14 geographical area. *See, e.g.*, ‘492 Patent Col. 11:6-22; Col. 13:39-49.

15 By including the terms “pager” and “paging system,” the Court also ignored the purpose
 16 of the invention. *See Minnesota Min. & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976
 17 F.2d 1559, 1566 (Fed. Cir. 1992) (looking to the “fundamental purpose and significance of the
 18 [patented] invention” in construing claim terms); *Bausch & Lomb, Inc. v. Barnes-*
 19 *Hind/Hydrocurve, Inc.*, 796 F.2d 443, 450 (Fed. Cir. 1986) (construing term in light of “the
 20 inventor’s purposes”). It makes no sense to construe the claims to cover only the “pagers” and
 21 “paging systems” as Apple described those terms throughout trial: those that send only short
 22 messages, with low data and power use on legacy paging systems. This construction is
 23 completely at odds with the entire objective of the invention, which was intended to replace a
 24 return phone call—containing extensive communications—not to exchange a few data bits.²

25 ² The legacy pager described in the patent only provided the “page”—the notification—that a
 26 telephone call was requested. The doctor in the elevator of Apple’s trial presentations received an
 27 emergency “page” from a patient and needed a telephone to communicate about the emergency,
 28 to hear the details, ask questions and render care. The very foundation of the data
 network/telephone network “independence” upon which Apple relies (and this Court accepted) is
 that the invention obviates the need for this telephone call. Apple’s argument to the jury that
 “pager” and “paging system” of the claims as construed were limited to devices/systems only

1 Nor did the inventors ever disclaim modern day cell phones from the scope of the word
 2 node, even while distinguishing their invention from the historical cell phones of the era that only
 3 utilized circuit-switching technology and were not the small, lightweight devices of today. In fact,
 4 at all times the PTO applied a broad meaning to the term “node” that encompassed cell phones.
 5 *See, e.g.*, Dinan Decl., Dkt. 69-6 at ¶ 31 (“the examiner equated the term ‘nodes’ of the pending
 6 claims with several handheld devices that are not limited to pager devices, including for example:
 7 (1) the Heide reference’s ‘portable, hand-held, battery-powered computer’ . . . , such as the
 8 ‘EPSON Model No. H1001BEW hand-held computer’ described in the context of the preferred
 9 embodiment” and “(2) the Gilbert reference’s ‘portable, hand-held, battery-powered computer’ . .
 10 . such as the ‘Panasonic model JT-790 hand-held computer’ described in the context of the
 11 preferred embodiment.”).

12 The Court accepted Apple’s proposal to import the word “pager” as a limitation on the
 13 claim term “node” based entirely on the presence of the words “paging unit” and “pager” in the
 14 preferred embodiments and not based on any discussion of the particular functionality of a narrow
 15 subset of pagers espoused by Apple. Importing these limitations was improper. “We recognize
 16 that there is sometimes a fine line between reading a claim in light of the specification, and
 17 reading a limitation into the claim from the specification.” *Comark Commc’ns, Inc. v. Harris*
 18 *Corp.*, 156 F.3d 1182, 1186-87 (Fed. Cir. 1998) (reversing construction that imported limitation
 19 from the preferred embodiment). “It is precisely against this type of claim construction that our
 20 prior case law counsels. . . . [C]laims are interpreted in the light of the specification. Although the
 21 specification may aid the court in interpreting the meaning of disputed claim language, ***particular***
 22 ***embodiments and examples appearing in the specification will not generally be read into the***
 23 ***claims.***” *Id.* at 1187. “[O]ne of the cardinal sins of patent law [is] reading a limitation from the
 24 written description into the claims.” *Phillips*, 415 F.3d at 1320.

25 Furthermore, “[t]here is presumed to be a difference in meaning and scope when different
 26 words or phrases are used in separate claims. To the extent that the absence of such difference in

27 (… cont’d)

28 equipped for the short notification message is completely at odds with the invention’s purpose of
 replacing the need for a return telephone call.

1 meaning and scope would make a claim superfluous, the doctrine of claim differentiation states
 2 the presumption that the difference between claims is significant.” *Comark Commc'ns, Inc.*, 156
 3 F.3d at 1187. A similar argument is true for claims among patent families because there is a
 4 presumption that “the same claim term in the same patent or related patents carries the same
 5 construed meaning.” *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1334 (Fed. Cir. 2003).
 6 Here, multiple patents flow from U.S. Patent No. 5,542,115 (the ‘115), which is the parent to the
 7 patents-in-suit and contains an identical specification. Several of the previous claims supported by
 8 this specification were explicitly directed to “pagers” and “paging systems.” *See, e.g.*, Claim 1,
 9 ‘115 Patent (“[a] method of operating a paging system, the paging system including a central
 10 control station **and a paging unit**”). This is additional evidence that the term “pager” or “paging
 11 system” in the patents-in-suit should not have been imported into the asserted claims, which never
 12 once mention these terms. *See, e.g., Marine Polymer Technologies, Inc. v. HemCon, Inc.*, 2009
 13 WL 2046041, at *9 (D.N.H. July 9, 2009) (declining to import a limitation into asserted claims
 14 when such limitation was explicitly included in claims in related patents flowing from same
 15 parent application).

16 The Court also erred by importing the “operate independently of a telephone network”
 17 limitation into the term “node.” This construction was based on a single sentence very late in the
 18 specification: “Thus, the invention provides a two-way paging system which operates
 19 independently from a telephone system for wireless data communication between users.” ‘492
 20 Patent Col. 14:14-16. This single sentence was not a limitation on the scope of the claim term
 21 “node”; rather it described *one method* for returning a “page” in which the data communications
 22 do not need to use telephone switching equipment for returning a “page.” *See* Dkt. 69-6 ¶¶32-36).
 23 This sentence indicates that there was no *need* for a telephone system to return a page, but the
 24 patent does not *require* independence from a telephone network. Indeed the patent specification
 25 illustrates connections to a telephone network, as GPNE argued in its Markman briefing:

26 Figures 1 and 3, and the associated specification disclose the presence of a
 27 telephone answering system and that the control station can field telephone calls
 28 for the pager. [Patents-in-Suit], Col. 3-Col. 6 (Fig. 1 (items 48 and 36), Fig. 3
 (steps 108 and 112), and Fig. 7 (items 448 and 36) all show “phone” elements
 integrated with the paging system described in the Patents.)

1 Dkt. 69 at 6. The patents disclose a system that *can* operate independently from the then-existing
 2 telephone system to return a message, but not one that is *required* to do so; i.e. the disclosed
 3 system could also depend on the telephone network. “[O]f course, a claimed invention is not
 4 limited to a particular mode of operation simply because it is capable of operating in that mode.”
 5 *Bell Commc'ns Research, Inc. v. Fore Sys., Inc.*, 62 F. App'x 951, 957 (Fed. Cir. 2003) (unpub.).³

6 **2. Leaving the Scope of “Pager” and “Paging System” to the Jury was Error**

7 Having chosen the words “pager” and “paging system” for the construction of the claim
 8 term “node,” it was still error to leave the scope of those terms undefined when presented to the
 9 jury. As the Court asked at *Markman*, “what is a pager?” This question dominated the trial. Is a
 10 pager a broad term for a device capable of sending data packets on a data network, like how iPads
 11 send data on LTE? Or is a pager a narrow term referring only to a device with certain additional
 12 “requirements,” to use Dr. Wilson’s words, such as having low data rates and low power usage
 13 via simulcasting on a set of frequencies designated by the FCC?

14 Contrary to Apple’s arguments at *Markman*, this is not a “fact question” for the jury to
 15 decide.⁴ The claim term “node” must have a fixed, unambiguous meaning. *Liquid Dynamics*, 355
 16 F.3d at 1367. “When the parties present a fundamental dispute regarding the scope of a claim
 17 term, it is the court’s duty to resolve it.” *O2 Micro*, 521 F.3d at 1362. Failure to resolve such
 18 disputes and asking the jury to do so is legal error. For example, in *Moba, B.V. v. Diamond*
 19 *Automation, Inc.*, 325 F.3d 1306, 1313 (Fed. Cir. 2003), the Federal Circuit reversed a district
 20 court’s denial of JMOL after the jury returned a verdict of non-infringement. The district court
 21 had construed a term “guiding steps” but “left undetermined whether the claim requires sequential

22 ³ GPNE preserved these errors for review. When submitting the final jury instructions and
 23 moving for JMOL at the conclusion of Apple’s case-in-chief, GPNE maintained its position that
 24 the term “node” should be construed as GPNE first proposed and sought resolution of the issue.
 25 See, e.g., GPNE’s Objections to Final Annotated Jury Instructions, Dkt. 505 at 2 (“GPNE
 26 maintains that this construction was the proper one.”); Dkt. 528 at 3-4 & n.1 (same); Dkt. 543
 27 (renewing all ground for JMOL). See *Hewlett-Packard Co. v. Mustek Sys., Inc.*, 340 F.3d 1314,
 28 1320 (Fed. Cir. 2003) (holding dispute over a claim construction must be raised in connection
 with jury instructions to be considered on JMOL.)

⁴ On summary judgment, the Court suggested that GPNE had agreed this was a fact question.
 GPNE did not. However, regardless, the law is clear that parties cannot argue conflicting claim
 constructions to the jury even by agreement. *Cytologix Corp.*, 424 F.3d at 1172.

performance of the steps.” Although the Court’s claim construction and instructions to the jury did not require sequential performance, the testimony could have led the jury to reach that conclusion. This was improper: “[T]he district court allowed the jury to add an additional limitation to the district court’s construction of ‘guiding steps.’ In this, the district court erred. Claim construction is a question of law and is not the province of the jury.” *Id.* Without the improper narrowing of the claim term, all of the evidence supported infringement and judgment as a matter of law was appropriate despite the jury verdict. *Id.* Cf. *Every Penny Counts, Inc. v. Am. Express Co.*, 563 F.3d 1378, 1383 (Fed. Cir. 2009) (holding district court correctly adopted a fixed meaning to a word used in a construction because if it had it not, “then it would quite clearly have failed to assign ‘a fixed, unambiguous, legally operative meaning to the claim’”).

Here, the jury verdict cannot rest on extra limitations on the meaning of the words “pagers” and “paging systems” not provided by the Court. The Court was obligated to clarify the scope of those words and that they did not include the additional limitations argued throughout trial by Apple. “There are times when we need to interpret interpretations more than to interpret things.” *Every Penny*, 563 F.3d at 1383 (internal citation and quotation omitted).

3. Apple Made Improper Arguments that Narrowed the Claim Scope

Even though this Court had already held on three separate occasions that the term “node” could include modern-day data devices like the iPhones and iPads operating on modern cellular data networks, like GPRS and LTE, Apple asked the jury to apply a narrower definition. Apple based its entire presentation to the jury on a theory that GPNE was “stretching” its claims to cover iPhones and iPads. The Court had already held that the term “node” even as a type of “pager” was broad enough to include cell phones, yet Apple consistently argued that it was not. *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) (the district court correctly prevented defendant’s expert from testifying regarding the meaning of “addressed to a client,” which was not interpreted by the court, and testifying that it “required an IP address,” which was a claim construction that had been rejected by the court). Moreover, Apple’s repeated attempts to argue that GPNE had *disclaimed* that its patents could cover cell phones was improper. “Whether prosecution history disclaimer applies is a legal question,” and one that Apple had already lost.

1 *Ecolab, Inc. v. FMC Corp.*, 569 F.3d 1335, 1342 (Fed. Cir. 2009) *amended on reh'g in part*, 366
 2 F. App'x 154 (Fed. Cir. 2009).

3 Apple asked the jury to apply a narrower scope of the term “node” as early as opening
 4 statements, over objections by GPNE, repeating the exact same argument it had made (and lost) at
 5 *Markman* and summary judgment:

6 Cell phones were alive and well and in existence in 1994. . . . And these inventors
 7 said, over and over and over again, that our invention is about a pager. It's not
 8 about a cell phone. So fundamentally what we're going to ask you to do is to hold
 9 GPNE to its patent, force them to be honest ***about what it is they actually got***
from the [USPTO]. . . . [B]ecause what they did patent, they patented a two-way
pager, not a cell phone, but a two-way pager.

10 Trial Tr. at 193-194. GPNE objected to these arguments and the corresponding slides because
 11 “these slides present legal arguments to the jury regarding the scope of claim terms (that have
 12 already been ruled upon by the Court).” GPNE Opening HPOs, Dkt. 397 at 3 (objecting to slide
 13 titled “GPNE Tried TWICE to GET Claims Covering Cell Phones” (ADX-105) and “GPNE Told
 14 the PTO that Its Patents Do Not Cover Cell Phones” (slide ADX-152)). The Court sustained
 15 GPNE’s objection to both slides, yet Apple continued to make these arguments.

16 This theme that the term “node” was limited to legacy pagers and specific paging systems,
 17 despite no such limitation in the Court’s actual construction, permeated Apple’s arguments:

- 18 • “Billy Manning . . . [will] reassure you that the Apple iPhone is not a pager. Never been a
 19 pager. Never will be a pager. Doesn’t work with a paging system. Can’t talk to the paging
 20 system. Doesn’t speak the same frequencies. Completely different, different approaches.”
 Trial Tr. at 208.
- 21 • “[Dr. Wilson] confirmed what you probably already suspect, that Apple’s phones are not
 22 pagers and they don’t work with a paging system. Instead they work on the AT&T network
 and on the T-Mobile network and on the Verizon network. ***Those are telephone networks,***
ladies and gentlemen, not paging networks.” *Id.* at 211.
- 23 • “A ***pager, we all know, allows you to get a signal in a basement or an elevator.*** . . . Anybody
 24 who’s been in an elevator or basement knows the phone doesn’t work so good.” *Id.* at 212.
- 25 • “What Dr. Wilson concluded is, in fact, that [paging systems and telephone networks] operate
 26 in a completely different way, that they don’t provide the same function at all, a – a pager is
 designed to take short, very low data messages, very reliable, long batter life, compact in
 size.” *Id.* at 215.

27 Apple also relied heavily on the same prosecution disclaimer arguments it had made (and lost) at
 28 *Markman*:

- “And the inventors at GPNE told the patent office this over and over again. A cell phone doesn’t have such great battery life. They work on that, but you have to plug it in every day. You can let the pager go on with a double A battery for six or eight weeks. They just perform fundamentally different functions.” *Id.* at 215-216.

Apple did not dance around the fact that it was arguing claim scope either, repeatedly accusing GPNE of “stretching their claims”:

- “What we found was that GPNE wasn’t sticking to their pager patent and ***was stretching their claims***. They wanted to cover other technology like cell phones. The problem is cell phones existed before GPNE came along. . . . When they stretch the claims, they’re not remaining true to their patents anymore.” *Id.* at 216.

When questioning GPNE’s witnesses, Apple kept the scope of the claims at the forefront of its questions along with its prosecution disclaimer argument. Apple asked Mr. Gabriel Wong, a co-inventor, about the scope of his invention and the meaning of the word “pager” in the disclosure, which Apple was allowed to do over GPNE’s objection. *Id.* at 298 (“[You list] features that pertain to your invention; right? A. Yeah, that’s correct. . . . Q. Okay, and the first thing that you isolate is you say your invention is lightweight; right? A. That’s correct. . . . Q. And the idea is that a pager can – you put a battery in it and it lasts four, six weeks; right? [Objection overruled.] A. Yes, as far as that goes.”). Apple also asked whether Mr. Wong told the PTO that “the size of a pager can be made smaller than a cellular phone due to its simplified design in both electronics.” *Id.* at 299-301.

Apple then asked Mr. Edwin Wong, a non-technical witness and the CEO of GPNE, about what the term “pager” meant and whether it could include a cell phone. *See* 408-409 (“Q. In fact, there were other words known back in the early ‘90s, including the word cell phone. . . . Q. And your father and Mr. Tsui, in these claims in their patents, could have used those terms, could have used the word ‘cellular,’; correct? . . . Q. And you, yourself, back in the 1990s, recognized that pagers were very different from cell phones; correct?”). Mr. Wong was shown a business plan from the 1990s in which Apple pointed out that GPNE was “distinguishing pagers and paging systems from cell phones and cellular systems.” *Id.* at 411; *see also id.* at 413-14, 467.

Apple also suggested during its cross-examination of Dr. Dinan that devices could not be both phones and nodes as construed by the Court, even though the Court had already held they could. *Id.* at 682, 685 (“Q. If this were a phone [in Figure 2] ***instead of a pager***, it might have a

1 microphone on it, wouldn't it?" "Q. And if it was a phone *instead of a pager*. . ."). And Apple
 2 repeated its rejected argument that the inventor should have used the term "cell phone" in the
 3 disclosure in order for the patent to apply to multi-feature, integrated devices. *Id.* at 686 ("Q. . .
 4 The word 'cell phone' existed in 1993 or 1994; correct?" "Q. Had Mr. Wong wanted to, he could
 5 have called his invention a cell phone; correct?").

6 During the direct testimony of its own witnesses, Apple again focused almost entirely on
 7 convincing the jury that the word "node" should be narrow. Dr. Wilson maintained, contrary to
 8 this Court's previous rulings, that there were critical differences between cell phones and pagers
 9 and that "pagers," in her definition, come with a certain set of additional restrictions not found in
 10 this Court's construction. "So pagers are relatively passive compared to cell phones. Cell phones
 11 are always anxiously trying to figure out which cell to go to next. That's one of the reasons we
 12 call it a cell phone. And that's one of the reasons they drain power so much. *But pagers don't do*
 13 *that.*" *Id.* at 1135. Dr. Wilson cited the patents as showing that the node in the claims "is a much
 14 simpler device than a cellular phone." *Id.* at 1136. She was asked to interpret the prosecution
 15 history and whether she found "any further discussion in these prosecution histories *that*
 16 *distinguish paging systems from cellular phone networks*" and she cited a 1994 declaration that
 17 had been refiled with the PTO in 2010 to support a conception date of 1993, and not to narrow the
 18 scope of the invention. *Id.* at 1138; *see also* 1140-41 ("GPNE tried to distinguish themselves from
 19 a telephone system, from a cellular telephone system, and that's how they wanted to get their
 20 patent. They wanted to distinguish themselves from the prior art, which was telephony, and say,
 21 no, we're a paging system").

22 When Dr. Wilson was asked to explain why the iPhones and iPads were not pagers in her
 23 opinion, her answer rested entirely on her narrow definition of the word "pager" as including only
 24 simulcasting pagers. *Id.* at 1146 ("Pagers have different purposes than cellular systems. Pagers are
 25 designed for short, critical messages Cellular telephones are designed for flexibility. . . .").
 26 Under her definition, pagers and cell phones have "differing designs, different purposes, different
 27 designs, different applications." *Id.* at 1147. She then detailed at length the differing design and
 28 function between pagers and cell phones under her narrow definition of pager. *Id.* at 1148.

1 Dr. Wilson continued to insist that the words “pager” and “paging system” could only
 2 have a single, narrow scope—legacy beepers—even though this Court had already ruled that
 3 these narrow definitions did not capture the full the scope of the term node as construed. *See Id.*
 4 1165 (“Q: Is there any degree of compatibility between devices that work on paging systems on
 5 the one hand and cellular telephone networks on the other? A. No. . . . Q. Do they speak the same
 6 language, pagers on the one hand, iPhones and iPads on the other? A. No. ***They’re totally***
 7 ***different animals.***”); *id.* at 1173 (“[Pagers and cell phones] have different protocols, they have
 8 different modes of operation, they have different data rates, different bandwidths, different ways
 9 of operating, and ***there’s times when I’d want a pager and times when I’d definitely want a cell***
 10 ***phone. But they aren’t interchangeable.***”). GPNE of course had never argued that pagers and cell
 11 phones were interchangeable; rather, consistent with the Court’s claim construction, GPNE had
 12 argued that a multi-function device like the iPhone or iPad could infringe regardless of whether it
 13 also had additional features and functionalities, including telephony.

14 Dr. Wilson also agreed that many of her “requirements” for a pager or paging system were
 15 not actually present in these patents.⁵ *Id.* at 1255 (agreeing that the patents don’t refer to
 16 simulcasting by all towers.); *id.* at 1259 (agreeing that the patents include a system with low
 17 radiated power and said nothing about elevators and basements); *id.* at 1261 (patents describe
 18 breaking a message into packets and nothing describing low data rates); *id.* at 1262 (agreeing to
 19 handoff between the control circles). But yet again, Apple focused on whether GPNE disclaimed
 20 these other systems. *Id.* at 1293 (“Q. What is the word that Mr. Wong used in his declaration to
 21 describe the type of device and the type of system that he was trying to patent? A. A paging
 22 system. Q. Did he have to use that word? A. No. Q. Were there other words and other kinds of
 23 mobile networks available in 1994? A. Absolutely. Q. But he chose pager? A. Yes.”). These
 24 issues were again raised over objection by GPNE. *See* Dkt. 474 at 2 (objecting to slides “because

25 ⁵ At trial, Apple provided GPNE (and filed in Court) a version of Dr. Wilson’s two-column
 26 “paging system” slide that characterized the high power of paging systems as requiring “3500
 27 watts.” Dkt. 399-1 at 30. Perhaps upon realizing that the patents do not disclose a range of power
 28 anywhere near that level, this language was removed from the slide shown to the jury and Dr.
 Wilson instead testified that 1000 watts was high power. When GPNE attempted to introduce this
 inconsistency, the Court sustained Apple’s objection to unused slides. *See* Order, Dkt. 481 at 2.

1 Apple is trying to paint the picture that GPNE’s inventors disclaimed cell phones”); Order, Dkt.
 2 481 (requiring Apple to include signature dates but otherwise overruling objections to slides
 3 ADX313-315).

4 Dr. Wilson maintained that “there are *several requirements for [a device] to be a pager,*”
 5 including that the devices be lightweight, but could point to nothing in the Court’s claim
 6 construction requiring all pagers to have these characteristics. *Id.* at 1239.

7 Q. . . . What is your understanding of a pager? Does it include all of these
 8 qualities? Or just are there some that are more important than others?

9 A. What I would say is a pager is something that operates on a paging system and
 10 that’s regulated by the FCC and other standards bodies. So I would say it’s a
 11 different animal than the cellular telephone network.

12 *Id.* at 1253.

13 Even Apple’s invalidity expert acknowledged a real dispute over the scope of the claims
 14 and that he himself applied a *different* scope during validity than Apple had used for its non-
 15 infringement defense. Mr. Rysavy testified that he did not apply the Court’s claim construction
 16 and that in his view, if GPNE’s patents were given a narrower scope advocated by Apple, then
 17 GPNE’s patents are valid. *Id.* at 1303; *see id.* at 1760:22-24 (Apple’s closing). But on the other
 18 hand, “if GPNE *tries to stretch its claims*, its pager claims to cover cell phones,” then they are not
 19 valid. *Id.* at 1303 (“My assignment was to determine if . . . GPNE’s pager patents were valid *if*
 20 *they were stretched to cover cell phones.*”). *See also id.* at 1385 (“Q. If GPNE is allowed to
 21 stretch its claims” “Q. If *GPNE persists in stretching those claims* to cover cell phones, are the
 22 claims valid?”); *id.* at 1387 (A. “*if you stretch the pager claims to cover phones*, then the GSM is
 23 prior art.”).

24 Apple went as far as suggesting that GPNE was being dishonest in giving the term “node”
 25 its full scope. Apple asked its own invalidity expert: “Do you recall the iPad I’m holding up as
 26 DTX355, he said this is a pager? Q. *Did you wonder how big his belt is?*” *Id.* at 1353. Apple
 27 then proceeded to ask the invalidity expert his opinion on infringement, “Do you think this iPad is
 28 a pager?,” at which point counsel for GPNE again objected. *Id.* Mr. Rysavy then testified that he
 did not believe cell phones were pagers, even though the Court had already concluded that a
 device could be both a cell phone and a pager. *Id.* at 1354, 1398-1401.

1 Claim construction is a question of law for the Court, not the jury. *Markman*, 517 U.S. at
 2 372. Arguments that attempt to narrow or reconstrue claim terms are improper at trial. *Finjan*,
 3 626 F.3d at 1207.

4 **4. Assuming *Arguendo* That the Jury Could Determine the Scope of**
 5 **Unconstrued Terms, Apple’s Argument Used An Improper “Person on**
 6 **the Street” Standard**

7 In this case, given the Court’s prior holdings and the unabashed efforts by Apple to ask
 8 the jury to construe terms, there is no question that the Court should have construed the terms
 9 “pager,” “paging system,” and “telephone network.” But even assuming *arguendo* that the jury
 10 was free to decide the scope of those terms, Apple argued that the jury should interpret those
 11 terms using an entirely improper standard.

12 Unconstrued terms must be given their ordinary meaning to one skilled in the art in light
 13 of the patent and file history from the time period of the invention. *Samsung Elec.*, 2014 WL
 14 660857, at *3 (quoting *Phillips*, 415 F.3d at 1313, 1321). This standard applies both to
 15 unconstrued claim terms and terms within a claim construction. *Advanced Fiber*, 674 F.3d at
 16 1373-74. Apple told the jury instead to apply another standard: the meaning to a “person on the
 17 street” as of today after considering documents such as a report on Hurricane Katrina.⁶ Apple
 18 cross-examined Dr. Dinan extensively on the scope of the term pager and what “someone on the
 19 street” or “people” generally might consider a pager. *See, e.g.*, Trial Tr. at 665:10-666:2 (“Q. . . *if*
 20 *you walked up to someone on the street in 1993 or 1994* and said let me show you this device,
 21 *this is a pager, they would say okay?*” “Q. Well, okay, so is it your opinion, then, in 1993 or 1994
 22 *that people would not have considered the iPad to be a pager?*”). Apple continued to ask not
 23 what a person of skill in the art would consider pagers, or what the Court had considered to be
 24 pagers within the scope of the term “node,” but what these undefined “people” on the street

25 ⁶ GPNE does not dispute that it too was forced to present evidence as to the meaning of these
 26 terms; GPNE had no choice after this Court ruled over GPNE’s protests that the scope of its
 27 claims was a question of fact. But when Dr. Dinan, GPNE’s expert, was asked about how he
 28 determined the meaning of the term pager—which Apple had insisted was indeed a question of
 fact—Apple objected as calling for a legal conclusion and was sustained. *Id.* at 549-550 (“Q. And
 how do you go about figuring out what the term ‘pager’ should mean as it’s used in these patents?
 Apple Counsel: Your honor, I’m going to object as calling for a legal conclusion. Court:
 Sustained.”).

1 would consider a pager. *Id.* at 666-667 (“Q. ***They thought*** they were compact; correct?” “Q. ***They***
 2 ***thought*** they were lightweight; correct?”; “Q. ***Let me keep going on the pager thing. People also***
 3 ***in 1993 or 1994 understood*** that paging signals would reach . . . the basement. . . ; correct?”).

4 Regardless of the technical background of the witness, Apple elicited their opinion on the
 5 scope of the word pager. *See, e.g., Id.* at 945-947 (asking Plaintiff’s damages expert: “Q. Mr.
 6 Dansky, given your understanding of the patents in this case and the claims at issue, was this
 7 [Motorola] device a pager within the meaning of the claims?”; “Q. Now, do you recall when the
 8 iPhone was introduced back in 2007? . . . When you first saw it, do you remember thinking, that’s
 9 a pager?”). Mr. Casanova, who is a marketing director at Apple and is not a person of skill in the
 10 art despite Apple’s efforts to argue to the jury otherwise, was asked a similar line of questions. *Id.*
 11 at 1079:6-17 (“Q. Going back to DTX 352, the iPhone 4, Mr. Casanova, let me ask you straight
 12 up, sir, ***is this device a pager?*** A. No, sir, it is not. Q. . . . Has anyone at Apple ever called that
 13 iPhone 4 a pager? A. No, Never. [. . .] Q. Does the iPhone 4 ever exchange signals of any kind
 14 with a paging system? A. No, it never has.”); *see id.* at 1079:21-1080:23 (same questions and
 15 answers for iPhone 5 and iPad 2). On cross, Mr. Casanova continued to insist that “a node is
 16 deemed by the Court as a pager on a paging system. We make phones, not pagers. ***It’s a***
 17 ***fundamental difference.***” *Id.* at 1111. When he was asked if he knew that the Court had not
 18 construed pager, he said “it’s a pager with two-way data capability. That’s pretty clear to me.” *Id.*
 19 at 1111. But Mr. Casanova’s clarity came after having “not studied the patents.” *Id.* at 1112.
 20 Instead Mr. Casanova “flipped through them. They’re technical. A lot of the stuff in there doesn’t
 21 make any sense to me, but some of it did.” *Id.*

22 Dr. Wilson, who was a person of skill in the art, failed to apply this well-established
 23 standard as well. Dr. Wilson wouldn’t even agree that the jury should be applying the plain and
 24 ordinary meaning of this term from the perspective of someone skilled in the art at the time of the
 25 invention. Instead, she testified that she applied a “totality of the evidence” standard. *Id.* at
 26 1231:10-14. To support her opinion that the scope of the term “paging system” was narrow and
 27 excluded cellular data systems, Dr. Wilson relied on a number of sources that were wholly
 28 irrelevant. First, she pointed to modern documents from the FCC and ETSI. *See id.* at 1160-61

1 (“Q. And have you, in your experience, observed the FCC to draw distinctions between paging
 2 systems and cellular telephone networks? A. Yes, I have.”); *see also* DTX 163 (2006 Hurricane
 3 Katrina report); *see* Trial Tr. at 1169 (comparing and contrasting “paging systems” as described
 4 by ETSI from “cellular phone systems”). GPNE objected to these documents on the grounds that
 5 they were irrelevant, but was overruled. *See* GPNE Wilson HPOs, Dkt. 474 at 2; Order, Dkt. 484
 6 at 1 (overruling objections to DTX163 and ADX330); *see also* Trial Tr. 1207 (Court overruling
 7 GPNE’s relevance objection to DTX 164, FCC “About Paging” document). On cross, Dr. Wilson
 8 confirmed that the purpose of looking at these documents was because “*the FCC helps us define*
 9 *what a pager is.*” Trial Tr. at 1240; *id* at 1264 (confirming that this 2006 report “*influences how*
 10 *you interpret these patents*”).

11 Apple’s improper arguments and complete reliance on irrelevant evidence require
 12 judgment as a matter of law, or at a minimum a new trial.

13 5. The Court Failed to Properly Instruct the Jury

14 When it became clear that Apple’s entire focus on trial would be impermissible arguments
 15 that GPNE “stretched” its claims, GPNE asked for jury instructions on three separate occasions to
 16 partially remedy the issue. *See* Third Amended Joint Jury Instructions, Dkt. 461, Instruction No.
 17 21 (asking for instruction that “[t]he court’s construction does not prohibit a ‘node’ from being
 18 both a pager and a telephone” and that a “pager could transmit certain communications on a
 19 paging system that operates independently from a telephone network while engaging in other
 20 types of communication on the telephone network” and a construction that plain and ordinary
 21 meaning refers to a person of skill in the art after reading the entire patent and file history); *see*
 22 *also* GPNE Objections, Dkt. 505 at 1-5 (asking again for different construction of “node” or for a
 23 clarifying instruction on the scope of unconstrued terms “pager” and “paging system that operates
 24 independently from a telephone network” in light of Apple’s presentation of its case in chief,
 25 which began just two days earlier); Dkt 536 GPNE Objections at 1-2 (same).

26 The Court eventually included an instruction that remained inadequate: “*For claim*
 27 *language where I have not provided you with any meaning*, the claim language’s plain and
 28 ordinary meaning to a person of ordinary skill in the art at the time of the invention applies.” Dkt.

549 at 23. This instruction therefore did not apply to the disputed terms within the Court’s construction of “node” (i.e. “pager” and “paging system that operates independently from a telephone network”) and did not remedy the other serious errors caused by Apple’s presentation of its case. Because the Court failed to properly instruct the jury on the law on these issues, GPNE is entitled to judgment as a matter of law or a new trial.

B. GPNE is Entitled to Judgment on its Affirmative Claims of Infringement

No reasonable jury could find against GPNE on its claims of infringement against Apple. Dr. Dinan testified that the devices that are capable of operating on a GPRS network (models A1332, A1387, A1328, A1396, A1430, and A1454) meet every element of Claim 44 of the ‘492 and Claims 19 and 22 of the ‘954. Tr. 646:22-653:21. He further testified that models A1429, A1403, and A1455, which are capable of operating on LTE, also infringe Claim 22. Trial Tr. 653:20-657:16. When all of Apple’s improper challenges to the term “node” are discarded, Apple is left with only a handful of cursory non-infringement arguments: information relating to count value, the aligning/clocking signal, and the use of differing frequencies. GPNE met its burden of satisfying each of these limitations and Apple did not present substantial evidence to the contrary.

For count value, Dr. Wilson testified that the term was not the equivalent to a countdown value, which is a point GPNE does not dispute. But Dr. Wilson did not dispute that the countdown value itself is calculated using information relating to the total number of packets. *Id.* 1226:15-1230:8. And, Apple’s own invalidity expert argued that something called the “more bit” in GSM, which contains absolutely no information about the number of packets (total or remaining) satisfied this exact same limitation. *Id.* 1372-73. These inconsistent arguments are not enough to overcome the clear evidence that the formula for the countdown value, which is itself a number sent during the transmission of data packets, contains the total number of data packets in the transmission, or TBC. The countdown value contains “information relating to a count value,” i.e. information relating to the total number of consecutively related data packets to be sent, which is all that is required by the limitation and the Court’s construction.

For the aligning signal, Dr. Wilson did not dispute GPNE’s ample evidence that this limitation was present in the accused devices. Instead, she only argued for disclaimer using an

1 argument this Court has already rejected. *Id.* 1213:1-1224:19. And, even if Apple is permitted to
2 rely on this untimely disclaimer argument to defeat GPNE's evidence, the argument is inapposite.
3 Dr. Wilson relies on a statement in the file history where GPNE had distinguished its
4 aligning/clocking signal from the pre-synchronization process described in Mouly and GSM. As
5 this Court already held, Dkt. 87 at 55-56, at no point did GPNE distinguish from the general
6 process of synchronization—which the trial testimony established and Apple did not dispute—all
7 accused devices must have in order to even be able to connect to the network in the first place.

8 For multiple frequencies, Dr. Wilson only attacked GPNE's evidence with respect to LTE.
9 Dr. Wilson focused on the language of Claim 44, even though Claim 22 was the only claim
10 asserted against devices that are capable of using LTE. Trial Tr. 1205:21-25; 1209:16-1212:24.
11 Dr. Dinan explained in detail why all three of these arguments lacks merit. *Id.* 1553:18-1558:15.
12 Claim 22 does not require four exact frequencies, one for each signal as Dr. Wilson argues. Claim
13 22 requires the use of differing frequencies for these signals. And Dr. Wilson's own testimony
14 confirmed that by its very nature, LTE uses many differing frequencies for each of the signals
15 transmitted and received by devices.

16 In light of the ample evidence supporting GPNE's infringement position on every single
17 limitation in the claims, and Apple's complete lack of evidence on these limitations aside from
18 improper arguments about claim construction, judgment as a matter of law in favor of GPNE on
19 infringement is proper. *See, e.g., Transmatic, Inc. v. Gulton Industries*, 53 F.3d 1270, 1278 (Fed.
20 Cir. 1995) (reversing finding of non-infringement because "patentee clearly did not intend to limit
21 the definition of [a claim term] in the manner suggested by the district court" and also because
22 "[d]ifferences in the way the patented invention and accused device function . . . are not legally
23 relevant to whether [the accused] device falls within the literal language of the asserted claim.").

24 **V. Conclusion**

25 For all the foregoing reasons, GPNE respectfully requests that the Court grant GPNE's
26 renewed motion for judgment as a matter of law or alternatively for a new trial.

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